

REMARKS

Applicants respectfully request reconsideration of the claim rejections set forth in the Office action dated October 27, 2006.

Summary

Claims 1 and 36 are currently amended. No new matter is added as a result.

Claims 106 – 113 are added.

Claims 1 – 3, 36 – 38, 71 – 73 and 106 – 114 are currently pending.

Summary of Substance of Interview

Applicants thank the Examiner, Andrew C. Flanders, for the telephonic interview on February 21, 2007. During the interview, the Examiner further explained the claim rejections and cited references. The Examiner suggested that the cited references may not teach a limitation about the final status of the combined digital audio file. No agreement was reached during the interview.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 3, 36, 38, 71, and 73 were rejected pursuant to 35 U.S.C. § 103(a) as being unpatentable over Ueno et al. (U.S. Patent 5,859,826) in view of Best (U.S. Patent 2,265,097). Claims 2, 37 and 72 were rejected pursuant to 35 U.S.C. 103(a) as being unpatentable over Ueno et al. in view of Best and in further view of Frederick (U.S. Patent No. 5,768,126).

Claim 1 recites, *inter alia*, each scale factor is based on an analysis of the entirety of each of said at least two digital audio files relative to each other.

As noted by the Examiner, “Ueno does not explicitly disclose that the analysis is of the entirety of each said digital audio file” (Office Action dated April 5, 2006; Page 3). Incorporating the signals from Best into the system disclosed by Ueno et al. renders the teachings of Ueno et al. unsatisfactory for their intended purpose.

However, the Examiner stated “the signals from Best are not incorporated into the system disclosed by Ueno, merely the teaching that the signals can be analyzed in their entirety” (Office Action dated October 27, 2006; page 4). The teaching that the signals can be analyzed in their entirety changes the principle of operation of Ueno et al. Ueno et al. teach an arrangement directed to “high efficiency encoding” for compressing multi-channel audio data (col. 1, lines 5 – 20; see also col. 2, lines 39 – 40; col. 3, lines 40 – 49; and col. 3, lines 50 – 56). Ueno et al. teach that the scale parameters are created in the common parameter extractor 141 (col. 12, lines 61 – 63). As seen in Figure 10, the inputs to the common parameter extractor 141 originate from the common analyzer 102. Ueno et al. teach the common analyzer 102 “selectively outputs only the portion of the audio data of the respective channels that are to be handled in common. If common handling is not performed, nothing is output” (col. 7, lines 2 – 7; emphasis added). Ueno et al. teach that the entirety of a signal is never analyzed to determine a scale factor. One skilled in the art would appreciate that modifying the teachings of Ueno et al. to analyze a signal in its entirety to generate a scale parameter would decrease the efficiency of the system because larger files take longer to analyze than portions of the signals. Ueno et al. specifically desire dealing with only a portion of the audio data. Signals may be analyzed in their entirety; however, it is evident that this Best teaching is in direct contrast to the teachings of Ueno et al. and changes the principle of operation. A person of ordinary skill in the art would not have used the teaching of analyzing the signals in their entirety of Best with the system of Ueno et al. Therefore, claim 1 is allowable because a *prima facie* case of obviousness has not been established [MPEP 2143.02(VI)].

Amended claim 1 recites, *inter alia*, applying each said scale factor to the entirety of each of said digital audio files respectively to create scaled digital audio files.

Ueno et al. teach that the common analyzer 102 “selectively outputs only the portion of the audio data of the respective channels that are to be handled in common” (col. 7, lines 2 – 7). The multiplexor 106 does not apply the scale

parameters to the entire digital audio signal 101a. In contrast, the multiplexor 106 applies the scale parameters to only the portion of the audio data handled in common. Ueno et al. only applies the scale factor to a portion of the digital signal in order to keep the file as compressed as possible.

There is no motivation to combine the entirety teaching of Best with Ueno et al. because applying the scale factor to the entire digital audio signal 101a would render the teachings of Ueno et al. unsatisfactory for their intended purpose. Ueno et al. direct their teachings at obtaining high efficiency encoding for compressing multi-channel audio data (col. 3, lines 50 – 55). One skilled in the art would appreciate that adding the scale factor to the entire digital audio signal 101a in Ueno et al. would increase the size of the data in the multiplexor 106, which would decrease efficiency. Therefore, claim 1 is allowable over the cited references because there is no motivation to combine the teachings of Best and Ueno et al.

Dependent claims 2 – 3 depend from allowable claim 1, so are allowable for at least this reason.

Independent claim 36 recites features that are similar to those discussed above, so is allowable for at least the same reasons that claim 1 is allowable. Further limitations of claim 36 are allowable over the cited references. For example, claim 36 recites each scale factor is based on an analysis of a root mean square, peak absolute value, or the combination thereof for each of said at least two digital audio files relative to each other. Best teaches analysis of the balanced sound level. “[T]he balance thereof being observed by the mixing operator in the monitor loudspeaker 36 connected over conductors 37” (col. 2, lines 50 – 54). Based on this observation, the mixing operator varies the sound levels by adjusting a rod 52 relative to the attenuation pad 47 – 48 (col. 30 – 47). In other words, the analysis is based on an audible sound level that is analyzed by the operator. Ueno et al. do not teach the factors that are considered when setting the scale parameters. Therefore, claim 36 is allowable over the cited references.

Dependent claims 37 – 38 depend from allowable claim 36, so are allowable for at least this reason.

Independent claim 71 recites features that are similar to those discussed above, so is allowable for at least the same reasons that claim 1 is allowable. Dependent claims 72 – 73 depend from allowable claim 71, so are allowable for at least this reason.

New Claims

Claims 106 – 113 are added. No new matter is added as a result.

Independent claim 106 recites features that are similar to those discussed above, so is allowable for at least those reasons. Further limitations of claim 106 are allowable over the cited references. For example, claim 106 recites generating first and second scale factors based on the audio file characteristic values and the maximum value allowed by the output audio file format. The cited references fail to teach or suggest a maximum output signal level allowed by an output audio file format. More specifically, there is no suggestion in the cited references to generate first and second scale factors based on the maximum value allowed by the output audio file format. Therefore, claim 106 is allowable over the cited references.

Dependent claims 107 – 108 depend from allowable claim 106, so are allowable for at least this reason. Further limitations of the dependent claims are allowable over the cited references. For example, the cited references fail to disclose the scale factors being functions of the audio file characteristic values and the maximum value allowed by the output audio file format as recited in claim 108.


Dependent claims 109 – 114 depend from allowable claim 1, so are allowable for at least this reason. The cited references fail to disclose a scale factor based on

the root mean square or peak level as recited in claims 109 – 111. The cited references also fail to disclose or suggest bringing up the overall level to a maximum as recited in claims 112 and 113. Claim 114 recites the single audio recording output is a modification of the at least digital audio files and is unable to be divided back into the individual digital audio signals. The Examiner suggested a limitation regarding the construction of the final digital audio output. The cited references fail to disclose a modified digital audio file that is unable to be reconstructed back into the original digital audio files. Ueno et al. teach a decoder that divides the output digital file into “the sound field closer to the original signal data of the channel under consideration” (col. 13, lines 16 – 18). Ueno et al. teach a demultiplexor 132 and common parameter adjustment unit 142 for canceling the common handling or dependency of the data of the channel under consideration among the channels handled in common (col. 12, lines 4 – 19). Best teaches that “ten holes [are] provided, each of which varies the attenuation pad 47 – 48 two db” (col. 3, lines 20 – 30). The adjustment of the db for each signal can be varied up and down 2 db as desired. Best teaches that an operator may vary the signal by 2 db in one direction. If the level is undesirable, the operator can re-adjust the signal to the original level by varying the signal by 2db in the opposite direction. The operator is able to reconstruct the original sound level.

CONCLUSION

Applicants respectfully submit that all of the pending claims are in condition for allowance and seeks early allowance thereof. If for any reason, the Examiner is unable to allow the application but believes that an interview would be helpful to resolve any issues, he is respectfully requested to call the undersigned at (312) 321-4200.

Respectfully submitted,



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